industry will be reluctant to opt out and, thus, the problem of monopoly extraction is apt to be serious.

For this reason, there is a compelling need for an SSO to extract specific ex ante commitments from prospective licensors as to the royalties they will charge if their technologies are included in the chosen standard.[75] Unfortunately, there is a danger. Were industry participants granted free reign to discuss royalties, costs, and other price metrics, inevitably the SSO process would become the perfect vehicle for bid-rigging and downstream collusion. Indeed, collaboration between horizontal competitors has always been closely scrutinized under the antitrust laws, and for good reason.[76]

It is unsurprising, therefore, that competitors using an SSO to facilitate price fixing commit a per se violation of the Sherman Act.[77] Similarly, an agreement within an SSO to standardize anything other than essential components for facilitating technological interoperability is illegal.[78] The risk of antitrust violation, however, is not inevitable. Indeed, two economists recently envisaged an efficient system of price competition that would yield the myriad benefits of ex ante royalty commitments without an appreciable fear of downstream collusion.[79] More specifically, the commentators envisaged an auction process in which each competing IP holder would submit its bid with a statement of the royalty rate at which it would license its IP.[80]

75. Not every case has understood the importance of ex ante versus ex post royalty negotiation. For the classic misstatement, see *Townshend*, 2000 U.S. Dist. LEXIS 5070, at *37 ("The adoption of a [sic] industry standard incorporating such proprietary technology does not confer any power to exclude that exceeds the exclusionary power to which a patent holder is otherwise legally entitled.").

76. *See, e.g.*, Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492, 509–10 (1988) (holding that the *Noerr-Pennington* doctrine does not protect anticompetitive conduct within private SSOs); Am. Soc'y of Mech. Eng'rs, Inc. v. Hydrolevel Corp., 456 U.S. 556, 577–78 (1982) (finding that an agreement by members of an accreditation body not to exclude a rival constitutes an antitrust violation); Nat'l Soc'y of Prof'l Eng'rs v. United States, 435 U.S. 679, 681 (1978); Radiant Burners, Inc. v. Peoples Gas Light & Coke Co., 364 U.S. 656 (1961) (finding that a trade association's refusal to deal with a non-member could constitute an illegal group boycott).

77. *See Promoting Innovation and Competition*, *supra* note 42, at 55.

78. *See, e.g.*, C-O-Two Fire Equip. Co. v. United States, 197 F.2d 489, 497–98 (9th Cir. 1952).

79. *See* Daniel G. Swanson & William J. Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, 73 ANTITRUST L.J. 1, 15–21 (2005).

80. *Id.*

Unfortunately, the presence of antitrust oversight has had a most undesirable effect. Rather than facilitate royalty competition in a closed auction process or other relatively contained setting, SSOs have prohibited discussion of specific royalties.[81] Given the relative frequency of high-profile antitrust actions against SSOs and their members, such hesitancy is perhaps unsurprising.[82] Surprising or not, however, the result has been a dearth of ex ante price competition and a concomitant loss in the form of ex post hold-up. SSOs have attempted to remedy the cost of monopoly pricing through an alternative mechanism, which is the subject of the following section.

B. *RAND as a Failed Solution to the Problem of Ex Post Hold-Up*

As noted, immutable antitrust concerns would arise were holders of substitute technologies to discuss collectively the royalty rates at which they would be willing to license to members.[83] The potential for collusion is not unavoidable. One possibility would involve an SSO forbidding any discussion of royalty rates between its members, but facilitating a bidding or auction process. Another option would be for an SSO to place a unilateral cap on the amount of royalties to be paid to any SSO member who owns relevant IP and make agreement to that limit a requisite of membership. A further avenue would be to require royalty-free licensing from all IP holders. Finally, prospective licensors could be compelled by an SSO to state the most restrictive terms (including maximum royalty rates) upon which they would be willing to license their technologies, if included in the relevant standard. For the reasons discussed *infra*, however, the only viable options involve an auction process or the disclosure of most restrictive terms—other avenues being rendered inferior by concerns of monopsony.[84] Unfortunately, fear of antitrust liability has largely driven SSOs from adopting such mechanisms.[85]

Instead, SSOs invariably require members to license to one another (and sometimes third parties) at "reasonable and nondiscrim-

81. *See* Miller, *supra* note 1, at 353.

82. *See Promoting Innovation and Competition*, *supra* note 42, at 33–56.

83. As explored below, a further barrier to the collective negotiation of royalty rates ex ante lies in the delay created by bilateral discussions, which impedes the timely operation for the SSO. In conjunction with antitrust concerns, this is the primary reason why SSOs favor RAND commitments ahead of ex ante royalty competition.

84. *See* discussion *infra* Part III.C.

85. *See supra* note 8.

inatory" (RAND) rates.[86] The obvious intent is that RAND licensing requirements operate as a functional constraint on ex post monopoly, thus allowing an SSO to perform its required function. Unfortunately, RAND is an abysmal failure. This Article argues that RAND effectively collapses into the constraint created by reputational and complementary effects, and therefore lacks any independent force. As a result, the practice of relying on RAND licensing should be discarded by SSOs. In order to induce the necessary changeover, the law should move to deter its use by both further undercutting its efficacy and moderating antitrust oversight. In short, RAND is an illusory constraint and should be abandoned.

Not everyone agrees with this contention. Most recently, George Cary, Paul Hayes, and Larry Work-Dembowski made an impassioned case for the viability and importance of the RAND process.[87] Their 2008 article concedes that judicial evaluation of such assurances "can be complex and fact-intensive," but confidently proclaims that "there should be *no doubt* that the courts and enforcement agencies are competent to apply antitrust law to deceptive FRAND commitments."[88] To justify their conclusion, the authors explain:

> Assessing whether a licensor has complied with its FRAND obligations does not require courts or agencies to make any determinations that they do not already commonly make in antitrust and intellectual property cases. Courts routinely calculate "reasonable royalties" in the patent litigation context and compare the "but for" competitive market to the market in which a restraint of competition exists in order to determine damages in the antitrust context. In assessing whether a licensor has met its FRAND obligations, a court would engage in similar calculations; it would compare the royalties charged in the ex post market to its assessment of what royalties would have prevailed in the competitive ex ante market.[89]

86. Illustratively, the American National Standards Institute (ANSI) Patent Policy and Guidelines require a patentee to commit to RAND licensing terms before being approved for a standard, but prohibit any discussion pertaining to what the actual royalty rate will be. *See* Robert A. Skitol, *Concerted Buying Power: Its Potential for Addressing the Patent Holdup Problem in Standard Setting*, 72 ANTITRUST L.J. 727, 728 (2005).

87. *See* Cary et al., *supra* note 1, at 1257–63.

88. *Id.* at 1261 (emphasis added). "FRAND" refers to "fair, reasonable, and nondiscriminatory." For all practical purposes, the concept should be treated as synonymous with RAND.

89. *Id.* at 1261–62.

Cary, Hayes, and Work-Dembowski's position is representative of those who defend SSOs' reliance on RAND assurances.[90] Yet their analysis is flawed, as is the view of others who would place primacy on such commitments. In fact, such ex ante agreements amount to little more than aoristic assurances of future conduct, fail to yield meaningful ex post constraints on price, and foster disproportionately costly ex post litigation. The following Subpart charts the conceptual and practical frailty of RAND as an independent solution to the hold-up dilemma.

1. Defining the Indefinable

This Article rejects the practice of requiring RAND commitments in the SSO process. The most obvious flaw lies in the indeterminism that fatally underlies the RAND concept. Between the two definitional terms—"reasonable" and "nondiscriminatory"—the latter is surely the more meaningful, yet is still plagued by uncertainty. The problem with requiring nondiscriminatory licensing arises from heterogeneity of circumstance. Must a licensor offer precisely analogous terms to nonmembers and members? How about to a company with which it shares a portfolio cross-licensing agreement versus companies with which it does not? What if a license entails a form of bilateral exchange involving consideration that is difficult to value? Would an IP holder who licenses nonprofit licensees at lower royalty rates than for-profit companies violate RAND on account of discriminatory pricing? These and other concerns prove problematic in practice.[91]

Nevertheless, the heart of the dilemma lies in injecting some semblance of meaning into the notion of a "reasonable" price.[92] When a prospective licensor agrees with an SSO to make its IP available on RAND terms, it is essentially agreeing to enter into ex post negotiations over royalty rates once a standard is established. Prices are determined in open markets subject to the unconstrained forces of supply and demand[93]—third parties, and in particular courts, should be loath to recreate or otherwise to predict the outcome of this process. Ex post determination of an appropriate

90. *See also* Justin Hurwitz, *The Value of Patents in Industry Standards: Avoiding License Arbitrage with Voluntary Rules*, 36 AIPLA Q.J. 1, 3–4, 24–25, 35–36; Daniel A. Crane, *Technocracy and Antitrust*, 86 TEX. L. REV. 1159, 1197 (2008).

91. *See* Lemley, *supra* note 1, at 1965.

92. *See* Swanson & Baumol, *supra* note 79, at 5 ("It is widely acknowledged that, in fact, there are no generally agreed tests to determine whether a particular license does or does not satisfy a RAND commitment.").

93. *See* MILTON FRIEDMAN, PRICE THEORY 8–11 (2007).

price is an injudicious exercise that is extraordinarily prone to misjudgment generally and under-compensating IP holders specifically.[94] Such exercises generally entail an inherently nebulous moral inquiry into what royalty rate is "just." The result is a heavily stochastic process that fails to yield either predictable or accurate results.

One might protest this conclusion on the ground that courts are routinely called upon to define reasonable prices.[95] It is a foundational principle of contract law, for instance, that parties need not agree to a price in order to create a legally enforceable contract—the courts will inject a reasonable price as needed.[96] In the world of IP, courts in patent infringement actions are routinely called upon to ascertain a reasonable royalty rate as a necessary step in computing damages.[97] Indeed, Professor Mark Lemley—one of the foremost experts in the field of antitrust and IP law—regards

94. *See* Richard A. Epstein, *Breaking the Patent Logjam*, FINANCIAL TIMES, Aug. 28, 2008, *available at* http://www.ft.com/cms/s/0/bf055c78-7508-11dd-ab30-0000779fd18c.html?nclick_check=1 ("Weak injunctions lead inexorably to compulsory licenses. These tend to be costly to litigate and to undercompensate inventors."). It should be noted that there is some controversy as to whether a court awarding damages to a patentee is likely to undercompensate him. *Cf.* Mark A. Lemley, *Distinguishing Lost Profits From Reasonable Royalties* 9–10 (Stanford Pub. Law & Legal Theory Working Paper Series, Research Paper No. 1133173 2007), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1133173; Brian J. Love, Note, *Patentee Overcompensation and the Entire Market Value Rule*, 60 STAN. L. REV. 263, 272 (2007). Lemley and Love each argue that the courts' focus on the entire market value of the product that infringes the patent is likely to lead to excessive compensation. This perspective is, of course, opposed by Professor Epstein in this setting. Nevertheless, there are good reasons to discount the prospect of excessive damages in cases of infringement in the SSO context. For one thing, there may simply not yet be a final product. Moreover, given the patentee's prior commitment to license on "reasonable" terms, one might expect a court to err on the side of undercompensation. Yet Professor Einer Elhauge has recently published a paper arguing that suboptimal pecuniary reward is indeed the likely result of a liability rule approach to the patent setting. Einer Elhauge, *Do Patent Holdup and Royalty Stacking Lead to Systemically Excessive Royalties?*, 4 J. COMPETITION L. & ECON. 535, 536 (2008) ("[C]urrent patent remedies often (arguably usually) result in royalty rates that are too low to sufficiently reward socially optimal invention.").

95. *See* 35 U.S.C. § 284 (providing that a patentee is entitled to no less than a "reasonable royalty" as damages for infringement and noting that a "court may receive expert testimony as an aid to the determination . . . of what royalty would be reasonable under the circumstances") (1999).

96. *See* U.C.C. § 2-305(1) (2003).

97. *See* Georgia-Pac. Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1117 (S.D.N.Y. 1970); *see also* Monsanto Co. v. Ralph, 382 F.3d 1374, 1383–85 (Fed. Cir. 2004).

judicial interpretation of RAND licensing as unobjectionable on this basis.[98]

However, the objection that courts can legitimately address the issue of defining reasonable royalty rates in an ex post context is itself vulnerable to numerous flaws. First, the conventional setting where courts inject a price into an otherwise complete contract works well where there is a defined market for the commodity in question.[99] For example, if a promisor fails to deliver oil pursuant to his contractual obligation, in an action for breach of contract, the court can look to the market for oil on the relevant day and inject a price term accordingly. In contrast, the SSO process often involves novel technology for which there is no immediate market—either historically or by analogy.[100] This is most problematic because—as the Federal Circuit has recognized—"[p]roof of an established royalty for the patent in suit is indeed one of the strongest measures of a reasonable royalty."[101] Moreover, the ultimate good for which the standard is being developed may be nonexistent at the time of the controversy, further depriving the court of potentially crucial information.[102] Lacking any baseline by which to compare a contested technology, courts would be forced to operate in the dark.

Second, in the IP setting where courts have been called on to compute reasonable royalty rates for the purpose of assessing damages, the results have been far from satisfactory. In particular, a

98. *See* Lemley, *supra* note 1, at 1966.

99. *See, e.g.*, Shell Oil Co. v. HRN, Inc., 144 S.W.3d 429, 434 (Tex. 2004) (noting that "the majority of decisions suggest that a commercially reasonable . . . price [is] . . . one within the range of . . . prices charged by other refiners in the market").

100. By its purpose, an SSO is created to facilitate the selection of one of many rival technologies and to market a new product. *See Promoting Innovation and Competition*, *supra* note 42, at 33–34.

101. T.J. Smith & Nephew Ltd. v. Parke, Davis & Co., Nos. 92-1240, 92-1241, 1993 U.S. App. LEXIS 25039, at *2 (Fed. Cir. Sept. 28, 1993) (unpublished table decision). The principal objection to a third party's determination of a "reasonable" price lies in that party's inability to tie the identified price to an objectively verifiable metric. Arbitrary assessments of proper compensation are highly unlikely to yield desirable rates of return. In contrast, a demonstrable history of negotiated licenses between patentee and various licensees yields valuable evidence of what price the patentee deemed appropriate.

102. The problem of valuing a technology absent a commercial product that embodies the relevant invention is prevalent within SSOs and in other licensing contexts. To bypass the problem, IP holders often enter into "reach-through" royalty licensing schemes, whereby the parties agree to provide licensors with a specified percentage of the downstream revenue from product sales. *See Promoting Innovation and Competition*, *supra* note 42, at 93–94.

liability rule approach creates a potential distortion toward undercompensation.[103] Although this perspective has been challenged, few seem to think that the courts get it right.[104] Moreover, in the case of computing damages, a demonstrable market for the patented good exists and serves as an important guide in determining reasonableness.[105] In the SSO setting, where no market necessarily exists, the fact of misjudgment is apt to be even worse.

Finally, some have argued that a licensor accused of violating its previous RAND commitment may defend its position "by demonstrating that [its] ex post licensing demands are consistent with the competitive position that it held ex ante."[106] This argument is, however, demonstrably vulnerable to a fatal pragmatic frailty. Absent actual ex ante price competition or comparable technologies in other markets, ex post inquiries into competitive prices ex ante are purely hypothetical. Judicial efforts to achieve such an end should be neither condoned nor encouraged, given the fact that the vagaries of decision-making, coupled with the cost of liability, create perverse incentives ex ante and do little to constrain pricing ex post.

2. RAND as a Failed Concept

It is not at all clear that an IP holder who agrees ex ante to license her technology on RAND terms, and who later seeks to impose a royalty rate that licensees consider excessive, will be constrained by her ex ante commitment.[107] However, licensors in the SSO context may indeed be bound by other, potentially powerful, constraints. In particular, a licensor that operates in numerous SSOs faces appreciable reputational limitations.[108] Similarly, in many settings, there are strong cultural norms that predispose the

103. *See supra* note 94.

104. *Id.*

105. *See supra* text accompanying notes 99–100.

106. *See* Cary et al., *supra* note 1, at 1260.

107. *See* Lemley, *supra* note 1, at 1909–12. Further weaknesses undercut the efficacy of RAND licensing commitments. In particular, not all stakeholders will have contractual standing to sue for breach of the RAND commitment. *Id.*

108. *See* Gerald F. Masoudi, Deputy Assistant Att'y Gen., Antitrust Div., U.S. Dep't of Justice, Efficiency in Analysis of Antitrust, Standard Setting, and Intellectual Property 15 (Jan. 18, 2007), *available at* http://www.usdoj.gov/atr/public/speeches/220972.pdf; *Promoting Innovation and Competition*, *supra* note 42, at 40–41. *See generally* RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 94 (Aspen 6th ed. 2003).

SSO process toward non-proprietary, open standards.[109] Moreover, an SSO member that is also a licensor will often stand to benefit from sales of downstream products that incorporate the standard. In such cases, the profits from downstream sources may eclipse those that would result from licensing.[110] Combined with reputational and cultural pressures toward open standards, in conjunction with the complementary pricing effects that would induce a rational IP holder/licensor to lower its royalty rate, SSO members may face appreciable constraints when licensing their IP that would seem to subsume any nebulous RAND guarantee.

In the presence of such constraints, it is not clear how RAND commitments offer any further, incremental limitations on an IP holder's ex post royalty setting. Indeed, it would seem that RAND licensing effectively collapses into the reputational and cultural constraints and therefore lacks any independent purpose.

In those scenarios where the latter constraints are absent, or present only in diluted form,[111] the need for a tangible limitation on ex post hold-up is pronounced.[112] Yet, once again, it is not clear what constraint is created by the "reasonable" condition. Construing the RAND assurance as equivalent to foregoing the right to injunctive relief would provide the strongest imaginable limitation.[113] If, by providing a RAND licensing assurance, one relinquishes the right to enjoin infringing activity by SSO members, one's ability to hold up a standard is limited (though not eliminated). In such a case, one could argue RAND guarantees possess some independent force.

However, this only holds true if the loss of injunctive relief is coupled with the absence of treble damages for willful infringement.[114] Yet the danger may be that an explicit RAND commit-

109. *See* Lemley, *supra* note 1, at 1893. For instance, standards that developed with respect to the Internet have historically done so in an environment where proprietary control is shunned. *Id.*

110. *See Promoting Innovation and Competition*, *supra* note 42, at 41.

111. This might be the case for a licensor that does not operate in numerous SSO processes.

112. Once more, this of course depends on the presence of substitute technologies. Where an SSO needs a particular technology, the ex ante and ex post prices will be the same. Any attempt to impose a price-reducing constraint in the absence of other constraints will simply induce the relevant patentee to leave the standard-setting process and impose its monopoly licensing restrictions ex post.

113. At least one scholar has argued that RAND assurances essentially require patentees to "contract out of an injunction-backed property rule, and into a reasonable-royalty liability rule." *See* Miller, *supra* note 1, at 362 (citing several other scholars' works in support of this point).

114. *See supra* text accompanying note 26.

ment conclusively establishes knowledge on the part of an SSO and its members, thus exposing them to charges of willful infringement.[115] This need not be an unreasonable proposition. If two parties negotiate, but fail to agree on a mutually acceptable price, the potential licensee's decision to persevere with commercialization is paradigmatically willful. The case for a liability rule is weak because we have no a priori basis for assuming that the patentee is more likely to insist on an "unreasonably" high royalty rate than the prospective licensee is to require an "unreasonably" low one.[116] The IP holder's prior guarantee should not amount to a surrender of its right to a proper return and a windfall gain on consumers of its technology.

Nevertheless, one could argue that RAND is meaningful only if it entails the elimination of treble damages. Were the assurance to be so construed, a patentee would be deprived of a credible ability to enjoin use of its patented technology by SSO members. In that setting, one would expect that a patentee would lack means to extract royalties wholly out of proportion with its technology's ex ante value. One might therefore imagine that SSOs' widespread reliance on the licensing concept is warranted. Yet this is not the case. In particular, the denial of a right to an injunction creates a de facto compulsory license on terms and pricing conditions set by a court.[117] Two inextricable problems necessarily follow.[118]

First, ex post litigation to define an indeterminate variable is immensely costly, both from the perspective of the litigating parties and society generally.[119] The costs thus created instill perverse incentives that direct prospective SSO members away from the collaborative process and toward de facto standardization. On this ground alone, there is little question that meaningful ex ante competition which yields a specific royalty rate, or upper limit, is superior.

115. *See* Hurwitz, *supra* note 90, at 21.

116. One of two possible rules is usually applied to property ownership, namely a property or liability rule. The former is typically defined as an ownership right that confers an absolute right to control the use and disposition of an asset. A liability rule, in contrast, strips an owner of the right to exclude others, so that anyone can consume the relevant resource upon payment of a price deemed appropriate by some third party. *See* Richard A. Epstein, *A Clear View of* The Cathedral*: The Dominance of Property Rules*, 106 YALE. L.J. 2091, 2091 (1997).

117. *Id.* (describing the owner's loss of holdout power in this situation).

118. In considering them, the reader should contrast the difficulties there encountered with the relative simplicity and efficacy of explicit ex ante royalty negotiations.

119. *See* Cary et al., *supra* note 1, at 1257–62.

Second, the loss of an injunction merely reduces ex post monopoly power, it does not eliminate it.[120] RAND commitments do not solve the problem in an environment where cultural, reputational, and complementary pricing effects are limited.[121] In particular, given the U.S. system in which each side generally pays its own fees,[122] infringing SSO members will rationally pay a premium to forego the expense and trouble of litigating the context-specific definition of a reasonable royalty to judgment. Solely on this basis, a RAND licensor will be able to extract a supracompetitive royalty from displeased licensees. The ultimate effect, magnified by a combination of risk aversion and legal uncertainty, is that RAND licensing fails to create a satisfactory constraint against ex post market power. At the same time, reliance on such assurances serves to inject significant and unwelcome cost to the ex post setting. Neither consequence is desirable, yet neither is inevitable.

In situations where other constraining factors are absent and the need for RAND licensing is greatest, the concept's failure is most tragic. It is in precisely these circumstances that an efficacious constraint on ex post hold-up is needed, and yet is not provided. As a result, there is a dire need for meaningful ex ante royalty-based competition that would yield binding contractual commitment to license IP at specified rates. The next Part explores how recent developments, in conjunction with proper steps in the future, promise to achieve such an end.

III.
PROMOTING AN EX ANTE SOLUTION THROUGH A TWO-PRONGED ATTACK—LEGISLATIVE, EXECUTIVE, AND JUDICIAL DEVELOPMENTS

A. *The Case for a Two-Pronged Attack*

Prospective SSO members face a variety of incentives, which, if properly aligned by policy makers, could induce a widespread

120. In particular, there is good reason to believe that litigation costs, rather than the threat of injunction, may drive hold-up. *See* John M. Golden, *"Patent Trolls" and Patent Remedies*, 85 TEX. L. REV. 2111, 2115, 2125–30 (2007).

121. *See* Skitol, *supra* note 86, at 728. *But cf.* Mark A. Lemley & Philip J. Weiser, *Should Property Rules or Liability Rules Govern Information?*, 85 TEX. L. REV. 783, 838–39 (2007) (arguing that standard-setting bodies play an important role in safeguarding hold-up but cannot effectively prevent hold-up in practice).

122. *See* Dan Slater, *The Debate Over Who Pays Fees When Litigants Mount Attacks*, WALL. ST. J., Dec. 23, 2008, at A8.

proliferation of ex ante royalty negotiation.[123] Such incentives operate as part of a simple cost-benefit analysis. In considering whether to forego RAND commitments in favor of something more definite, members must weigh the threat of antitrust liability associated with obtaining a binding ex ante royalty-specific assurance against the efficacy of alternative ex post constraints on hold-up. Under contemporary standards—indeed, under any prudent legal framework—there will be costs to either avenue.

An SSO that requires its members to compete with one another on the basis of both technological superiority and price (royalty) inevitably invites attention from U.S. enforcement agencies.[124] The threat associated with horizontal communications of sensitive price and cost data is simply too great to ignore entirely. The benefit, however, comes in the unequivocal elimination of ex post monopoly hold-up by IP holders whose rights are infringed by the chosen standard. As noted, this need is most pressing in the limited cases where cultural and other constraints are absent.[125] By extrapolating contractual commitments to license at specified rates while the IP holder faces competition from substitute technologies, monopoly rents that permeate through to consumers can be avoided.[126]

The alternative to royalty competition is to eliminate the risk of antitrust liability by foregoing any competition on price at all, and instead to address the inevitable fear of ex post hold-up through generic ex ante commitments from prospective licensors. The downside is directly proportional to the efficacy of the ex ante commitments that one can extract from members without requiring either a specific price or an explicit upper limit. However, RAND licensing is so indeterminate that it effectively amounts to no limitation at all, collapsing as it does into a reputational constraint.[127]

Policy makers can address the quagmire and spur a proliferation in ex ante royalty negotiations in two ways. First, they can reduce the expected cost of antitrust oversight, subject to the qualification of not diluting antitrust scrutiny to the level where

123. More specifically, if industry participants were persuaded both that RAND licensing agreements were legally vacuous and that antitrust law would not mistakenly condemn legitimate royalty negotiations, they would discard the practice of acquiring RAND assurances in favor of ex ante price competition.

124. Such attention will be unavoidable given the ease with which collusive cartel activity could be painted as legitimate royalty competition.

125. *See supra* text accompanying notes 107–110.

126. Note that even wholly fixed cost increases may result in downstream consumer harm by reducing supply-side entry.

127. *See supra* text accompanying notes 107–10.

likely coordinated pricing effects will outweigh the harm caused by hold-up. Second, they can further reduce the effectiveness of RAND commitments. Cary, Work-Dembowski, and Hayes suggest that carrying out the latter goal "would render FRAND obligations meaningless, would allow unfettered exercise of monopoly power by essential patent holders, and would cause debilitating uncertainty in the standard-setting process."[128] Nothing could be further from the truth. A marked reduction in the enforcement of RAND pricing would unquestionably spur specific limits on ex ante royalty rates, thereby both better constraining monopoly power by essential patentees and enhancing certainty. Nevertheless, the danger of embarking on this route alone lies in its likely effect of disincentivizing general involvement in the SSO process. Thus, the optimal approach is to adopt a two-pronged attack.

The year 2008 proved somewhat encouraging from this perspective. The D.C. Circuit[129] partially undermined the troublesome and portentous 2007 *Qualcomm* decision by the Third Circuit, which held that a conscious violation of a RAND commitment can give rise to an antitrust violation.[130] Nevertheless, the D.C. Circuit should have gone further. Given the shortcoming, more can be done in the future to induce industry reliance on pricing constraints beyond RAND commitments. The following two Subparts explore recent developments that bear on the legal force behind RAND assurances and the proper scope of antitrust oversight in the SSO process, respectively.

B. Eviscerating the Substance of RAND Licensing

This Article rejects the concept of RAND licensing as an independent prophylactic device against ex post hold-up.[131] In order to induce SSOs to reject RAND requirements in favor of objective and determinate royalty obligations, courts should undermine the legal force of RAND licensing commitments. In particular, a "failure" to abide by such commitments—assuming at a conceptual level that one can violate an inherently indeterminate agreement at all—should not amount to an antitrust violation. Courts have diverged in recent years concerning the proper treatment to be given RAND assurances. The Third Circuit's perilous 2007 *Qualcomm* decision[132] is of particular note. Fortunately, the D.C. Circuit's 2008 holding in

128. *See* Cary et al., *supra* note 1, at 1262.
129. Rambus Inc. v. FTC, 522 F.3d 456 (D.C. Cir. 2008).
130. Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297, 314 (3d Cir. 2007).
131. *See* discussion *supra* Part II.B.
132. 501 F.3d 297.

Rambus[133] constitutes a significant step away from *Qualcomm*'s reasoning. Coupled with the weight of preexisting case law, *Rambus* signifies a potential first step toward eviscerating the legal efficacy of RAND licensing.

1. A Patentee's Right to Obtain Optimum Royalties

The defining characteristic of patent ownership has been described as the right to extract royalties "as high as [one] can negotiate with the leverage" of exclusivity.[134] The question, therefore, is to what extent this threshold principle survives a commitment to license on reasonable terms.

Townshend v. Rockwell Int'l Corp.[135] is an important case that properly denigrated the idea that a refusal to license IP on previously agreed-to RAND terms can constitute a violation of the antitrust laws. In relevant part, the court was asked to decide whether a patentee's attempts to obtain "unfair royalty rates" amounted to an antitrust violation in light of his prior assurance that he would "either waive his rights or 'be willing to negotiate licenses with other parties on a non-discriminatory basis on reasonable terms and conditions.'"[136] The court wasted little time in rejecting this contention:

> Even if the Court were to consider the unfair terms alleged by [the charging party], the Court finds that these terms do not state an injury to competition. . . . [The charging party] has not explained how the royalty rates state unfair terms. A patent owner's pursuit of optimum royalty income is not an act in restraint of trade which violates the antitrust laws.[137]

A similar line of reasoning was subsequently adopted by the District of New Jersey in its 2006 decision, *Broadcom Corp. v. Qualcomm, Inc.*[138] Broadcom alleged that Qualcomm refused to license its patent on "fair, reasonable, and nondiscriminatory" (FRAND) terms, in violation of its commitment to the SSO.[139] The

133. 522 F.3d at 466–67.

134. *See* Brulotte v. Thys Co., 379 U.S. 29, 33 (1964).

135. No. C 99-0400 SBA, 2000 U.S. Dist. LEXIS 5070 (N.D. Cal. Mar. 28, 2000).

136. *Id.* at *20 (internal citation omitted).

137. *Id.* at *23–24.

138. No. 05-3350, 2006 U.S. Dist. LEXIS 62090, at *22 (D.N.J. Aug. 31, 2006), *rev'd in part*, 501 F.3d 297 (3d Cir. 2007).

139. Readers should refrain from placing undue emphasis on the word "fair," which most commentators believe to be superfluous. *See, e.g.*, Damien Geradin & Miguel Rato, *Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-Up, Royalty Stacking and the Meaning of FRAND*, 3 EUR. COMPETITION J. 101,

court gave short shrift to that argument, finding that such allegations failed to state a claim for monopolization or attempted monopolization.[140] In doing so, it seemed to adopt Qualcomm's argument that setting licensing prices "too high" does not constitute an anticompetitive act.[141] Of particular interest are the court's comments concerning the desirability of judicial determination of "reasonable" prices: "This Court shares the Supreme Court's concern that reviewing and supervising the terms upon which Qualcomm licenses its patents . . . may be beyond the effective control of the Court under the antitrust laws."[142]

The court noted that "[w]hile this 'agreement' [to license on FRAND terms] may give rise to liability based on another theory such as breach of contract, it does not give rise to antitrust liability."[143]

There is much to find encouraging in these decisions. The sole shortcoming lies in the courts' assertion that there is nothing untoward about a patentee's attempt to maximize royalties. This position can be faulted for failing to appreciate the distinction between ex ante competition and ex post monopoly caused by lock-in.[144] Nevertheless, the courts' holding that an agreement to license on RAND terms is too vague to create an antitrust violation is highly laudable.

A RAND commitment is nothing more than an agreement to enter into future negotiations to agree to a price within a spectrum of possible prices that may be deemed "reasonable" by some objective (though elusive) metric. One consequence of this limitation is that a dispute between parties with two proposed price terms does not in itself suggest that one party is unreasonable—both their proposed terms may lie within the spectrum of reasonableness. More fundamentally, the idea that a real, objective, and identifiable standard of reasonableness exists and can be brought to bear in the SSO context is unrealistic. Economists have attempted to give some

112–14 (2007). For the purposes of this Article, FRAND and RAND are considered synonymous.

140. *Broadcom*, 2006 U.S. Dist. LEXIS 62090, at *25.

141. Memorandum in Support of Defendant's Motion to Dismiss at 27, Broadcom Corp. vs. Qualcomm, Inc., No. 05-3350, 2006 U.S. Dist. LEXIS 62090 (D.N.J. Dec. 12, 2005) ("Broadcom's allegations are essentially that the price QUALCOMM charges for a license is too high. Charging what the market will bear, however, is not an anticompetitive or unreasonable act.").

142. *Broadcom*, 2006 U.S. Dist. LEXIS 62090, at *20.

143. *Id.* at *31.

144. This, of course, necessitates some mechanism to constrain royalty setting in an ex post context.

definitional force to a reasonable price,[145] but the practical ability of a court to do so turns in large part on the nature of the market in question. The setting of an SSO—which may not yet have given rise to a downstream market and which involves a novel IP-protected technology without other applications—may be particularly ill-suited to any external attempt to define a band of "reasonableness."

This Article applauds the District of New Jersey's conclusion "that reviewing and supervising the terms upon which Qualcomm licenses its patents . . . may be beyond the effective control of the Court under the antitrust laws."[146] Not all courts have been quite as agnostic, however. For instance, the District Court for the District of Columbia approved a settlement decree that involved a commitment by Microsoft to make certain of its IP rights available on RAND terms.[147] In doing so, the court opined that "reasonableness" is an objective standard.[148] Nevertheless, the reach of the decision is limited. In particular, *Microsoft* involved the approval of a remedy following an antitrust offense, as opposed to the enforcement of an ex ante contractual undertaking.[149] In addition, the court declined to engage in greater specificity beyond RAND, noting that "case law on the subject of licenses and antitrust remedies advises that courts are best excluded from 'the administration of intricate and detailed rules' relating to business affairs."[150] Thus, authority prior to 2006 largely supports this Article's view that RAND is unworthy of legal cognition—at least insofar as it purports to create a duty under the antitrust laws. Unfortunately, these commendable decisions were seriously undermined by the Federal Trade Commission and the Third Circuit.

2. A Dangerous Turn in 2007—the Third Circuit and FTC's Embrace of RAND

Unfortunately, the District of New Jersey's decision in *Broadcom* did not stand long, as it was reversed by the Third Circuit in

145. *See, e.g.*, Swanson & Baumol, *supra* note 79, at 25–45 (opining that RAND licensing commitments may constitute a significant constraint on ex post hold-up and suggesting that an "efficient component pricing rule" be used to calculate an appropriate licensing fee).

146. *Broadcom*, 2006 U.S. Dist. LEXIS 62090, at *20.

147. United States v. Microsoft Corp., 231 F. Supp. 2d 144 (D.D.C. 2002).

148. *Id.* at 193.

149. *Id.* at 150, 202.

150. *Id.* at 193 (quoting United States v. Paramount Pictures, 334 U.S. 131, 163 (1948)).

2007.[151] The Third Circuit held that a patentee's intentionally false promise to license its technology on RAND terms creates "actionable anticompetitive conduct" if relied upon by the SSO in incorporating the technology into the standard.[152] This conclusion was based on a solid theoretical foundation, as the court displayed sensitivity to the systemic risk of hold-up in the standard-setting process and the concomitant need for an SSO to possess some means of constraining ex post monopoly pricing.[153]

As a general matter, there is no question that antitrust law can play a valuable role in disincentivizing strategic behavior ex ante, in particular by discouraging SSO members from actively concealing, or not revealing, patented technologies that a standard may infringe.[154] SSOs should be free to make an informed choice, and in particular to discard patented inventions in favor of non-proprietary technology, where the technologies at issue are substitutable. By prohibiting manipulative nondisclosure of IP rights by SSO members, the antitrust laws can serve a valuable purpose in enhancing the efficiency of the standardization process.[155]

Of course, the Sherman Act cannot be used to condemn all instances of nondisclosure—it only applies to acts or omissions that threaten to result in monopoly power. So, for example, a patentee's decision not to reveal its IP should not amount to an antitrust violation if its action merely resulted in the absence of RAND assurances. But a Sherman Act violation would correctly be found where royalty-free, royalty-cap, or specific royalty terms would have been agreed to in the event of disclosure.

The Third Circuit's mistake was to think that enforcement of antitrust laws can serve a beneficial role in giving force to ex ante RAND commitments.[156] The indeterminacy inherent in the idea of "reasonable" pricing renders such a commitment edentulous. The court gave precious little attention to this crucial point, merely re-

151. Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297 (3d Cir. 2007) (holding that a patentee's breach of an agreement to license on RAND terms can constitute an antitrust violation).

152. *Id.* at 314.

153. *Id.* at 310.

154. *See generally Promoting Innovation and Competition*, *supra* note 42, at 33–56.

155. Consistent with this policy, numerous antitrust actions have been taken against SSO members that strategically withhold relevant patents. *See, e.g.*, In re Dell, 121 F.T.C. 616 (1996), *available at* http://www.ftc.gov/os/decisions/docs/vol 121/FTC_VOLUME_DECISION_121_(JANUARY-JUNE_1996)PAGES_561-655. pdf; In re Union Oil Co. of Cal., (F.T.C. Mar. 4, 2003), *available at* http://www.ftc.gov/os/adjpro/d9305/030304unocaladminemplt.pdf.

156. *Qualcomm*, 501 F.3d 297 (2007).

jecting (in a footnote) the argument "that antitrust liability cannot turn on so vague a concept as whether licensing terms are 'reasonable.'"[157] The court observed that the "reasonableness of royalties is an inquiry that courts routinely undertake using the 15-factor test set forth in *Georgia-Pacific*."[158] Yet it neglected to consider the several ways in which alleged violations of a RAND agreement may be distinguishable. In cases of patent infringement, a market for a product entailing the patented invention invariably exists and serves an important role in assessing damages. Yet, even with this advantage, courts have been criticized for seriously mis-valuing infringed IP rights.[159] Given such deficient performance in situations far better-suited to assessing "reasonable" royalties, there are convincing reasons for concluding that antitrust law has no business becoming involved in disputes over RAND licensing.

To support its determination that intentionally erroneous assurances to license ex post on RAND terms can amount to a violation of the Sherman Act, the Third Circuit relied closely on a decision of the full FTC in *In re Rambus*.[160] Indeed, the court stressed that "*Rambus* is particularly noteworthy for its extensive discussion of deceptive conduct in the standard-setting context and the factors that make such conduct anticompetitive."[161] In *Rambus*, the FTC placed significant value on the role of RAND licensing, opining that such commitments "may further inform SSO members' analysis of the costs and benefits of standardizing patented technologies."[162] The FTC further explained:

> The exclusionary element alleged here is that Rambus engaged in a course of deceptive conduct. Complaint Counsel assert that Rambus . . . [misled SSO] members regarding the price of Rambus's technology and thwarting their ability to make informed choices. This sort of deceptive conduct is not competition on the merits. Just as "false or misleading advertising has an anticompetitive effect," distorting choices through deception obscures the relative merits of alternatives and prevents the efficient selection of preferred technologies.[163]

157. *Id.* at 314 n.8.

158. *Id.* (citing Georgia-Pacific Corp. v. United States Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970)).

159. *See* Lemley, *supra* note 94, at 2 (arguing that courts often distort the reasonable royalty measure); Elhauge, *supra* note 94, at 537 (arguing that inaccurate jury verdicts can often lead to undervalued royalties).

160. In re Rambus, Inc., No. 9302, 2006 FTC LEXIS 60 (F.T.C. Aug. 2, 2006).

161. *Qualcomm*, 501 F.3d at 312.

162. *In re Rambus*, 2006 FTC LEXIS at *4–*5.

163. *Id.* at *62 (internal citation omitted).

It concluded that "Rambus's conduct also . . . prevented other [SSO] members from avoiding exposure to monopoly pricing by securing commitments regarding future royalty rates at a time when alternative technologies still offered unblunted competition."[164]

There is much to find unsatisfactory in the FTC and Third Circuit's decisions. Both improperly bestowed legal recognition upon a concept unworthy of it. By holding that a violation of a commitment to license IP at a "reasonable" royalty rate constitutes an antitrust offense, the FTC and Third Circuit not only purport to impose liability on the basis of an indeterminate standard but artificially encourage SSOs to rely on RAND in circumstances where they should not, increasing the uncertainty faced by prospective SSO licensors.[165]

The FTC and Third Circuit's holdings were gravely deficient on three grounds. First, they perpetuate a system that fails to impose a meaningful constraint on ex post monopoly. Second, by imposing a highly indeterminate legal obligation on patentees, they create a disincentive on the part of prospective licensors to join SSOs. Third, they create unnecessary ex post litigation costs.

3. D.C. Circuit to the Rescue?—RAND as a Source of Antitrust Liability

Given the Third Circuit's holding in *Qualcomm* and close reliance on the FTC's *In re Rambus* holding, the D.C. Circuit's 2008 decision to overturn the latter judgment is highly significant.[166] At issue was Rambus's alleged deception in failing to disclose to the relevant SSO that it had four patented technologies with which it could hold up the standard.[167] The D.C. Circuit was called upon to review the FTC's holding that Rambus's deception allowed it "*either* to acquire a monopoly through the standardization of its patented technologies rather than possible alternatives, *or* to avoid limits on its patent licensing fees that the SSO would have imposed as part of its normal process of standardizing patented technologies."[168] Given the alternative findings made by the FTC, the D.C. Circuit's holding that deceptive conduct leading to higher prices does not constitute monopolization precluded an antitrust offense.[169]

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164. *Id.* at *82.

165. *See* Curran, *supra* note 9, at 992–94 (describing the social cost created by ex post litigation over uncertain RAND assurances).

166. Rambus Inc. v. FTC, 522 F.3d 456 (D.C. Cir. 2008).

167. *Id.* at 459–60.

168. *Id.* at 459 (emphasis in original).

169. *Id.*